

Title (en)
Fan and heat exchanger assembly

Title (de)
Gebläse-Wärmetauschereinheit

Title (fr)
Assemblage de ventilateur avec échangeur de chaleur

Publication
EP 0881395 B1 20050420 (EN)

Application
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Priority
US 86636897 A 19970530

Abstract (en)
[origin: EP0881395A2] A mixed flow fan and heat exchanger assembly (10) is "blow through" in that the fan (16) discharges air into the upstream face of the heat exchanger (12) which provides a flow resistance. The fan (16) is mixed flow so that there are both axial and significant radial components to the air flow exiting the fan impeller (16-1). The radial components result in a static pressure facilitating flow through the heat exchanger (12). The assembly (10) includes an impeller (16-1) having a generally cylindrical hub (16-2) and a number of backwardly swept blades (16-3). The impeller (16-1) has an outlet swept radius that is greater than its inlet swept radius. A shroud (14) encloses the impeller (16-1) and guides the air flow into the impeller (16-1) and to the heat exchanger (12). The cylindrical hub (16-2) and a blade apparent solidity of less than one make the fan impeller (16-1) adaptable to manufacturing in a single piece by a molding process. In a second embodiment there is a downstream blockage and the radial components to the air flow reduce impingement upon the blockage. <IMAGE>

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Cited by
CN103696987A; KR100461647B1; DE10336291B4; GB2358225A; GB2358225B; GB2378237A; DE10207275B4; GB2378237B; CN106762827A; US6450760B1; US6584799B2

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